

LIST OF CONTENTS

NUMBER 1

- | | |
|--|--|
| M. WAGNER, H. VONACH and
R. C. HAIGHT | 1 Measurement of the activation cross section for the
reaction $^{93}\text{Nb}(n,n')^{93m}\text{Nb}$ in the neutron energy range
6–9 MeV |
| D. Y. YANG, G. S. CHEN and
H. P. CHOU | 9 Application of preconditioned conjugate gradient-like
methods to reactor kinetics |
| K. BEHRINGER | 35 Application of the Wiener–Hermite functional
method to the stochastic oscillator |
| A. GALPERIN and M. SEGEV | 49 Effective void fraction for a BWR assembly with
boiling in the bypass region |
| G. BALL and Z. WEISS | 59 STYX-1: a benchmarking program for neutron
transport calculations in fuel-assembly type
geometries |
| J. R. WANG and CHUNKUAN SHIH | 71 Establishment and application of Kuosheng BWR/6
channel flow stability map with RETRAN02/MOD5
code |
| | 83 Press Release from the NRPB |
| | I Guidelines for the preparation of typescripts for
direct reproduction |

NUMBER 2

- | | |
|---|--|
| M. FEIZ | 85 Development of nodal interface conditions for a P_N
approximation nodal model |
| SEUNG CHEOL LIM and KUN JAI LEE | 91 A mass conservative numerical solution of vertical
water flow and mass transport equations in
unsaturated porous media |
| G. S. SRINIVASAN, OM PAL SINGH,
R. K. VYJAYANTHI and
R. PRABHAKAR | 101 New statistical features for sodium boiling and leak
noise detection in liquid metal fast breeder reactors
under poor signal-to-noise ratio conditions |
| C. R. CALABRESE and C. R. GRANT | 117 Use of heterogeneous finite elements generated by
collision probability solutions for a reactor core |
| N. MORISHIMA | 129 Information contraction and extraction by multivari-
ate autoregressive modeling |

Algorithm

N. MORISHIMA

- 137 On the accurate fast evaluation of finite Fourier integrals using cubic splines

Technical Note

A. M. IBRAHIM

- 141 Transuranium isotopes production and their effect on the three-dimensional core calculation

- 147 Book Review

- 149 Current Papers in Nuclear Energy

- I Guidelines for the preparation of typescripts for direct reproduction

NUMBER 3

KANCHHI SINGH and VINOD KUMAR

- 153 Solution of the multigroup diffusion equation in hex-z geometry by finite Fourier transformation

V. M. MASLOV

- 163 Curium fission cross-section analysis

ALISON M. STOLLE

- 167 Application of stochastic diffusion theory to the interpretation of the ^{252}Cf source-driven noise analysis method for subcriticality determination

M. M. R. WILLIAMS

- 185 A new model for describing the transport of radio-nuclides through fractured rock. Part II: numerical results

R. L. BUCKLEY, S. K. LOYALKA
and M. M. R. WILLIAMS

- 203 Numerical studies of transport in porous media

Technical Notes

YIGAL RONEN

- 225 Muon-induced fission of actinides for nuclear waste disposal

JOHN L. RUSSELL JR

- 227 On the nature of the cold fusion process

Letter to the Editors

R. A. KARAM and
RONALDO D'AVILA

- 229 Solid state effects on Doppler broadening of ^{238}U resonances in UO_2

- 231 Book Reviews

- 233 Current Papers in Nuclear Energy

I Guidelines for the preparation of typescripts for direct reproduction

NUMBER 4

- | | | |
|---|-----|--|
| D. P. BURTE and S. G. VAIDYA | 237 | Parametrization for optimization of reload patterns for boiling water reactors |
| M. J. ABBATE, M. M. SBAFFONI and O. TORASSO | 251 | Control rod distribution for an HCPWR fuel assembly |
| G. C. BAKOS, I. KAPPOS and N. F. TSAGAS | 255 | Build-up factors for two energies (1.43 and 2.75 MeV) of photon penetration through single- and double-layer shielding slabs |
| A. RÁCZ, S. KISS and S. BENDE-FARKAS | 265 | Logic based feature detection on incore neutron spectra |
| M. M. R. WILLIAMS | 279 | Radionuclide transport in fractured rock. A new model: application and discussion |
| <i>Technical Note</i> | | |
| P. T. KRISHNA KUMAR | 299 | Estimation of systematic and statistical uncertainties in reactor physics measurements by the partition technique |
| <i>Letter to the Editors</i> | | |
| J. D. LEWINS | 303 | Notation for integrals of transport theory |
| I Guidelines for the preparation of typescripts for direct reproduction | | |

NUMBER 5

- | | | |
|---|-----|---|
| T. JEVREMOVIC, Y. OKA and S. KOSHIZUKA | 305 | Conceptual design of an indirect-cycle, supercritical-steam-cooled fast breeder reactor with negative coolant void reactivity characteristics |
| OM PAL SINGH, S. PONPANDI, R. HARISH and R. SHANKAR SINGH | 315 | Response to small reactivity perturbations in an oxide and metal fuelled medium-sized liquid-metal fast breeder reactor |
| G. C. POMRANING | 321 | Boundary conditions for the discrete ordinate equations |
| Z. BILANOVIC and A. A. HARMS | 337 | The nonlinear dynamics of a coupled fission system |

- JOO SANG LEE and KUN JAI LEE 347 Dynamic simulation of a forced circulation evaporating system
- Technical Notes*
- D. L. HENDERSON 361 First-flight escape probabilities for infinite cylinders having a quadratic source distribution
- M. A. SALEHI, A. SHIRANI and M. FEIZ 365 Solution of the 1-D multigroup time-dependent diffusion equation using the orthogonal collocation method
- ORION DE O. SILVA and AIRTON PRATI 371 A visual system to help WIMSD4 users to prepare its input data file
- 377 Current Papers in Nuclear Energy
- I Guidelines for the preparation of typescripts for direct reproduction

NUMBER 6

- NASIR M. MIRZA and SIKANDER M. MIRZA 381 Effect of flow rate and power perturbations on dose rates due to coolant activity in low-power research reactors
- KAMALA BALAKRISHNAN, UMASANKARI KANNAN and ANIL KAKODKAR 391 Reactivity worth of liquid poison jets in the moderator
- G. F. THOMAS and D. H. BARBER 407 Numerical solution of Bateman systems
- V. D. KURINY, YU. A. IVANOV, V. A. KASHPAROV, N. A. LOSHCHILOV, V. P. PROTSAK, E. B. YUDIN, M. A. ZHURBA and A. E. PARSHAKOV 415 Particle-associated Chernobyl fall-out in the local and intermediate zones
- R. L. BUCKLEY, S. K. LOYALKA and M. M. R. WILLIAMS 421 Numerical studies of transport in porous media II: picket fence and fracture angle models
- DAE SIK KIM and POONG HYUN SEONG 433 A study on the development of an automatic fault diagnosis system for testing nuclear power plant digital electronic circuits
- 443 Book Review
- 445 Current Papers in Nuclear Energy

I Guidelines for the preparation of typescripts for direct reproduction

NUMBER 7

- ANURADHA SHARMA and D. C. SAHNI 449 Evaluation of fundamental decay constants by the S_n method
- JUNG WON NA and KUN JAI LEE 455 Characteristics of boron adsorption on strong-base anion-exchange resin
- S. B. DEGWEKER and M. SRINIVASAN 463 Statistics of time-correlated pulses in the presence of a non-extendible dead time
- G. VERDÚ, J. L. MUÑOZ-COBO, C. PEREIRA and D. GINESTAR 477 Lambda modes of the neutron-diffusion equation: application to B.W.R.'s out-of-phase instabilities
- B. OZGENER and H. A. OZGENER 503 The solution of the criticality eigenvalue problems in the application of the boundary element method to the neutron diffusion equation
- 519 Current Papers in Nuclear Energy

I Guidelines for the preparation of typescripts for direct reproduction

NUMBER 8

- TERUAKI OHNISHI 525 Selective amplification of the amount of nuclear information released by the newsmedia
- BRIGITTE STROHMAIER 533 Reaction-model calculations of cross sections for neutron-induced reactions on ^{23}Na
- I. I. BASHTER 547 Fast-neutron flux distribution in ducted light and heavy concrete shields
- J. L. BLACK and S. E. F. ROFE 553 Multiple feature analysis of sodium boiling noise data
- ANDREJ TRKOV and MATJAŽ RAVNIK 561 Application of ENDF/B-VI data for the WIMS lattice code
- R. L. BUCKLEY, S. K. LOYALKA and M. M. R. WILLIAMS 569 Numerical studies of transport in porous media: III. Radioisotope migration in fracture angle formations

I Guidelines for the preparation of typescripts for direct reproduction

NUMBER 9

- | | | |
|--|-----|--|
| E. SAJO, M. L. WILLIAMS and
M. ASGARI | 585 | Comparison of measured and calculated neutron transmission through steel for a ^{252}Cf source |
| A. D. CALDEIRA and E. S. CHALHOUB | 605 | A program for generating pointwise weighting functions |
| A. J. C. STEKELENBURG and
T. H. J. J. VAN DER HAGEN | 611 | Two-phase flow monitoring by analysis of in-core neutron detector noise signals—a literature survey |
| G. C. POMRANING | 623 | Asymptotic and variational derivations of the simplified P_N equations |
| W. J. M. DE KRUIJF and A. J. JANSSEN | 639 | On the definition of the fuel temperature coefficient of reactivity for pin-cell calculations of an infinite lattice |
| | 649 | Current Papers in Nuclear Energy |
| | I | Guidelines for the preparation of typescripts for direct reproduction |

NUMBER 10

- | | | |
|---|-----|--|
| J. JORDANOVA and O. PENCHEV | 653 | Neutron leakage spectra through a beryllium slab bombarded by 14 MeV neutrons |
| MAN GYUN NA and HEE CHEON NO | 659 | Quantitative evaluation of swelling or shrinking level contributions in steam generators using spectrum analysis |
| KANCHHI SINGH and
V. JAGANNATHAN | 667 | Solution of the multigroup diffusion equation in triangular-z geometry using finite Fourier transformation |
| F. R. ANDRADE LIMA,
C. A. BRAYNER DE OLIVEIRA LIRA
and A. GANDINI | 679 | Sensitivity analysis of thermohydraulic systems via heuristic generalized perturbation theory (HGPT) methods |
| SERHAT ALTEN and
RICHARD A. DANOFSKY | 691 | Knowledge base expert system control of spatial xenon oscillations in pressurized water reactors |
| R. L. BUCKLEY and S. K. LOYALKA | 701 | Radionuclide migration in fractured media: numerical studies of advection/diffusion in a fracture and diffusion in the surrounding rock matrix |
| | 719 | Book Review |

I Guidelines for the preparation of typescripts for direct reproduction

NUMBER 11

- M. A. ABDALLA and R. B. PEREZ 721 A Lagrangian-based nonlinear closed-loop control algorithm: application to the advanced liquid metal reactor
- T. E. BOOTH and K. W. BURN 733 Some sample problem comparisons between the DSA cell model and the quasi-deterministic method
- HARK RHO KIM and NAM ZIN CHO 767 Global/local iterative methods for equivalent diffusion theory parameters in nodal calculation
- 785 Current Papers in Nuclear Energy

I Guidelines for the preparation of typescripts for direct reproduction

NUMBER 12

- KENGO HASHIMOTO 789 Linear modal analysis of out-of-phase instability in boiling water reactor cores
- B. MAHALAKSHMI and P. MOHANAKRISHNAN 799 NODHEX: a 2-D diffusion code based on the nodal expansion and method in hexagonal geometry and its validation
- G. F. THOMAS 809 The transport of radionuclides discharged from a geological waste repository
- TRAN DINH TRI 815 Application of Autoregressive Moving Average Model in reactor noise analysis
- A. HÉBERT 823 Application of a dual variational formulation to finite element reactor calculations
- 847 Current Papers in Nuclear Energy

I Guidelines for the preparation of typescripts for direct reproduction

